

ABSTRACT

A method and system for providing a magnetic element that can be used in a magnetic memory is disclosed. The magnetic element includes pinned, nonmagnetic spacer, and free layers. The spacer layer resides between the pinned and free layers. The
5 free layer can be switched using spin transfer when a write current is passed through the magnetic element. The magnetic element may also include a barrier layer, a second pinned layer. Alternatively, second pinned and second spacer layers and a second free layer magnetostatically coupled to the free layer are included. At least one free layer has a high perpendicular anisotropy. The high perpendicular anisotropy has a perpendicular
10 anisotropy energy that is at least twenty and less than one hundred percent of the out-of-plane demagnetization energy.